

Notice of Allowability	Application No.	Applicant(s)	
	10/799,463	MINIUM ET AL.	
	Examiner	Art Unit	
	LI B. ZHEN	2194	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to response filed 7/7/2010 and interview on 7/29/2010.
2. ☒ The allowed claim(s) is/are 1,4-12,17-21,23-33 and 38.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>7/29/2010</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

/Li B. Zhen/
Primary Examiner, Art Unit 2194

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Michael Dodd (Reg. No. 46,437) on July 29, 2010.

The application has been amended as follows:

a. Amend the claims according to the following:

1. (Currently Amended) A system that facilitates the interface of non-integrated applications, comprising:

a processor coupled to memory that ~~retains~~stores:

a first application program interface (API) of a first, source-control application, the first API configured as an artifact provider, the first API comprising:

a first web service which returns artifact identifiers comprising universal resource identifiers (URIs) that individually correspond to artifacts of the source-control application;

wherein each artifact of the artifacts of the source-control application includes an item of data publicly exposed to other applications: and

wherein each artifact of the artifacts of the source-control

application is associated with a build of a software program written in software code stored in the source-control application; and

a first method that receives a URI as a parameter and returns an instance of an artifact that has an artifact identifier that matches the URI that was received as the parameter;

a second application program interface (API) of a second, defect-tracking application, the second API configured as an artifact consumer that hosts artifacts of the defect-tracking application, the artifacts of the defect-tracking application including references the defect-tracking application publicly exposes to other applications, each reference being associated with one referring artifact hosted by the defect-tracking application and is a link to one referenced artifact of the source-control application hosted by the artifact provider, the link further comprises a link type that describes a relationship between the referring artifact of the defect-tracking application and the referenced artifact of the source-control application, the defect-tracking application being configured to access the items of data of the artifacts of the source-control application via the first API, the source-control application being configured to access the references of the artifacts of the defect-tracking application via the second API;

wherein the defect-tracking application is configured to access the items of data of the artifacts of the source-control application via the first API by:

using the web service of the first API to obtain the URIs that individually correspond to artifacts of the source-control application; and

repeatedly calling the first method of the first API with the obtained URIs

used as parameters.

2-3. (Cancelled)

4. (Currently Amended) The system of claim 1, further comprising a linking component that links the reference with the corresponding artifact of the ~~first~~ source-control application.

5. (Previously Presented) The system of claim 4, wherein the linking component is an artifact identifier held by the artifact consumer that points to an artifact.

6. (Previously Presented) The system of claim 4, wherein the links is a binary link.

7. (Previously Presented) The system of claim 1, wherein at least one of the provider and the consumer is a tool or service.

8. (Previously Presented) The system of claim 1, wherein the artifact provider registers an artifact type for each artifact it provides, and registers a corresponding link type that each artifact can host.

9. (Original) The system of claim 1, further comprising a generic artifact provider

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(GAP) that interfaces to a tool to facilitate storing and exposing both artifacts and artifact links.

10. (Original) The system of claim 9, further comprising a GAP adapter that provides an interface between the GAP and a non-integrated application.

11. (Original) The system of claim 1, further comprising a cache that stores the artifacts and associated artifact links.

12. (Original) The system of claim 1, further comprising a user interface that facilitates presenting inter-artifact references.

13. (Cancelled)

14-16. (Cancelled)

17. (Previously Presented) The system of claim 1, wherein the link is an artifact identifier that is an immutable and uniquely constructed key.

18. (Previously Presented) The system of claim 1, further comprising a link manager that manages a cache by updating and purging cache contents.

19. (Previously Presented) The system of claim 1, wherein the artifact provider and artifact consumer are at least one of loosely coupled and tightly coupled.

20. (Previously Presented) The system of claim 1, further comprising a classifier that makes an inference based on parameters related to at least one of the artifact consumer, artifact provider, and non-integrated applications.

21. (Previously Presented) The system of claim 1, wherein the artifact provider creates and reveals a URI for at least one of loosely-coupled server-based interactions, loosely-coupled clients, caching, and tightly-coupled interactions that support artifact-specific functions by contract with a caller.

22. (Cancelled)

23. (Currently Amended) A computer-readable storage medium having computer-executable instructions for performing a method for facilitating an interface between non-integrated applications, the method comprising:

providing a first application program interface (API) of source-control application, the first API configured as an artifact provider ~~that communicates with a first non-integrated application~~, the first API comprising:

a first web service which returns artifact identifiers comprising universal resource identifiers (URIs) that individually correspond to artifacts of the first

source-control application; and

a first method that receives a URI as a parameter and returns an instance of an artifact that has an artifact identifier that matches the URI that was received as the parameter;

exposing a referenced artifact hosted by the ~~first~~ source-control application via the artifact provider, the referenced artifact comprising an item of public data of the ~~first~~ source-control application;

providing a second application program interface (API) of a defect-tracking application, the second API configured as an artifact consumer that ~~communicates with~~ hosts artifacts of the a second non-integrated defect-tracking application, the ~~second~~ defect-tracking application including a referring artifact comprising an item of public data of the ~~second~~ defect tracking application;

exposing a reference held by ~~second~~ defect-tracking application and the referring artifact associated with the reference via the artifact consumer; and

linking the referring artifact to the referenced artifact via the reference, the reference including an artifact identifier of the referenced artifact, the ~~second~~ defect-tracking application being configured to access the item of public data of the referenced artifact via the first API, the ~~first~~ source-control application being configured to access the item of public data of the referring artifact via the second API;

wherein the ~~second~~ defect-tracking application is configured to access the item of public data of the referenced artifact via the first API by:

using the web service of the first API to obtain a URI that corresponds to

the referenced artifact; and

repeatedly calling the first method of the first API with the obtained URI used as a parameter.

24. (Currently Amended) The ~~method~~ computer-readable storage medium of claim 23, further comprising ~~the acts of~~ computer-executable instructions for:

registering an artifact type for the referring artifact and the referenced artifact;
and

registering a link type that the referring artifact and the reference artifact hosts.

25. (Currently Amended) The ~~method~~ computer-readable storage medium of claim 23, further comprising computer-executable instructions for presenting dependency information of the referenced artifact to a user, the information including at least one of link type, artifact type, artifact name, and modification date.

26. (Currently Amended) The ~~method~~ computer-readable storage medium of claim 23, wherein at least one of the artifact consumer or artifact provider is a web service.

27. (Currently Amended) The ~~method~~ computer-readable storage medium of claim 23, further comprising computer-executable instructions for generating an artifact proxy that represents data stored in a non-integrated application.

28. (Currently Amended) The ~~method~~ computer-readable storage medium of claim 23, wherein the referenced artifact and referring artifact are representative of at least one of a source file, defect, requirement, test result or build.

29. (Currently Amended) The ~~method~~ computer-readable storage medium of claim 23, wherein computer-executable instructions for linking the referring artifact to the referenced artifact via the reference comprise[[s]] computer-executable instructions for creating a link between the referring artifact and the referenced artifact that includes a referring DRI, a referenced URI, and a link type.

30. (Currently Amended) The ~~method~~ computer-readable storage medium of claim 23, further comprising computer-executable instructions for discovering which referring artifacts hold links to a specific referenced artifact.

31. (Currently Amended) The ~~method~~ computer-readable storage medium of claim 23, further comprising computer-executable instructions for raising an event when the referenced artifact is at least one of created, deleted, and changed.

32. (Currently Amended) The ~~method~~ computer-readable storage medium of claim 23, further comprising computer-executable instructions for providing external addressability for the referenced artifact by the artifact provider.

33. (Cancelled).

34-37. (Cancelled)

38. (Previously Presented) A computer-implemented system that facilitates data integration among one or more non-integrated applications in a development environment, comprising:

at least one processor, coupled to a memory, that executes the following computer- executable components:

an integration service in the development environment that includes one or more nonintegrated applications that each comprise at least one artifact, the integration service comprises:

a first source-control application and a ~~second~~ defect-tracking application that each include one or more artifacts, the one or more artifacts are items of data of the applications that are publicly exposed, the one or more artifacts include artifact types and unique artifact identifiers;

a first application program interface (API) configured as an artifact provider associated with the first source-control application, the artifact provider that facilitates exposing at least a referenced artifact of the first source-control application, the first API comprising:

a first web service which returns artifact identifiers comprising universal

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resource identifiers (URIs) that individually correspond to artifacts of the ~~first~~source-control application; and

a first method that receives a URI as a parameter and returns an instance of an artifact that has an artifact identifier that matches the URI that was received as the parameter;

a second application program interface (API) configured as an artifact consumer associated with the ~~second~~defect-tracking application, the artifact consumer that facilitates exposing at least a referring artifact of the ~~second~~defect-tracking application and a reference associated with the referring artifact, the reference includes an artifact identifier corresponding to the referring artifact exposed by the artifact provider, the ~~second~~defect-tracking application being configured to access the referenced artifact of the ~~first~~source-control application via the first API, the ~~first~~source-control application being configured to access the referring artifact of the ~~second~~defect-tracking application via the second API; and

a linking component that facilitates creation of a link between the referring artifact and the referenced artifact via the reference included in the artifact consumer, the link includes a link type that indicates a type of relationship between the referring artifact and the referenced artifact;

wherein the ~~second~~defect-tracking application is configured to access the referenced artifact of the ~~first~~source-control application via the first API by:

using the web service of the first API to obtain a URI that corresponds to the referenced artifact; and

repeatedly calling the first method of the first API with the obtained URI used as a parameter.

CONTACT INFORMATION

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to LI B. ZHEN whose telephone number is (571)272-3768. The examiner can normally be reached on Mon - Fri, 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hyung Sub Sough can be reached on 571-272-6799. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Li B. Zhen/
Primary Examiner, Art Unit 2194